

I Claim:

1. A semiconductor component, comprising:

a semiconductor substrate;

an insulation layer on said semiconductor substrate;

a semiconductor layer configured on said insulation layer;

a first doped terminal zone and a second doped terminal zone formed in said insulation layer; and

a drift zone formed in said insulation layer;

said drift zone formed between said first doped terminal zone and said second doped terminal zone; and

at least one of said first doped terminal zone and said second doped terminal zone directly adjoining said semiconductor substrate.

2. The semiconductor component according to claim 1, wherein said first terminal zone and said second terminal zone reach through said insulation layer into said substrate.

3. The semiconductor component according to claim 2, wherein
said first terminal zone and said second terminal zone are
doped complementary with respect to said semiconductor
substrate.

4. The semiconductor component according to claim 1, wherein
said second terminal zone is of a complementary conduction
type with respect to said first terminal zone.

5. The semiconductor component according to claim 1,
comprising:

a depletion zone configured between said second terminal zone
and said drift zone;

said depletion zone having a conduction type; and

said first terminal zone and said second terminal zone having
a conduction type that is complementary to said conduction
type of said depletion zone.

6. The semiconductor component according to claim 1, wherein:

said first terminal zone has a conduction type; and

said drift zone has a conduction type that is equivalent to the conduction type of said first terminal zone.

7. The semiconductor component according to claim 1, wherein said drift zone includes a plurality of complementary doped adjacent sections.

8. The semiconductor component according to claim 7, wherein:

 said plurality of said complementary doped adjacent sections includes first sections and second sections;

 said first sections and said first terminal zone are of a first conduction type;

 said first sections are connected to said first terminal zone;

 said second sections and said depletion zone are of a second conduction type complementary to said first conduction type; and

 said second sections are connected to said depletion zone.

9. The semiconductor component according to claim 7, wherein:

said plurality of said complementary doped adjacent sections includes first sections and second sections;

said first sections and said first terminal zone are of a first conduction type;

said first sections are connected to said first terminal zone;

said second sections and said second terminal zone are of a second conduction type complementary to said first conduction type; and

said second sections are connected to said second terminal zone.

10. The semiconductor component according to claim 7, wherein said plurality of said complementary doped adjacent sections run in a longitudinal direction between said first terminal zone and said second terminal zone.

11. The semiconductor component according to claim 10, wherein:

said plurality of said complementary doped adjacent sections includes first sections and second sections;

said first sections and said first terminal zone are of a first conduction type;

said first sections are connected to said first terminal zone;

said second sections and said depletion zone are of a second conduction type complementary to said first conduction type; and

said second sections are connected to said depletion zone.

12. The semiconductor component according to claim 10,
wherein:

said plurality of said complementary doped adjacent sections includes first sections and second sections;

said first sections and said first terminal zone are of a first conduction type;

said first sections are connected to said first terminal zone;

said second sections and said second terminal zone are of a second conduction type complementary to said first conduction type; and

said second sections are connected to said second terminal zone.

13. The semiconductor component according to claim 10,
comprising:

a depletion zone configured between said second terminal zone
and said drift zone;

said plurality of said complementary doped adjacent sections
running between said first terminal zone and said depletion
zone.

14. The semiconductor component according to claim 1, wherein:

said semiconductor substrate is p-doped; and

the one of said first doped terminal zone and said second
doped terminal zone that directly adjoins said semiconductor
substrate is n-doped.

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